REMARKS

The Official Action dated October 23, 2002 has been carefully considered. Accordingly, the changes presented herewith, taken with the following remarks, are believed sufficient to place the present application in condition for allowance. Reconsideration is respectfully requested.

Claims 4 and 13 have been cancelled; claims 1, 10, 19 and 29 have been amended and claims 31-36 have been added to further define the present invention. Support for the added and amended claims may be found at page 4, lines 10-18 and original claims 4 and 13. Attached hereto is "**Version With Markings To Show Changes Made**" showing the changes made to the claims with the current amendment. Since these changes do not involve any introduction of new matter, entry is believed to be in order and is respectfully requested.

Applicants note that the Official Action failed to acknowledge the receipt of the Supplemental IDS filed October 10, 2001. Applicants request the Examiner acknowledge receipt of the Supplemental IDS.

In the Official Action, claims 1-5, 8-14, 17-26, 29 and 30 were rejected under 35 U.S.C. § 103(s) as being unpatentable over Edgar (U.S. Patent No. 6,075,590) and further in view of Ross et al. (U.S. Patent No. 3,748,471). The Examiner asserted that Edgar discloses an apparatus and method by which the surface defects in a scan of film containing the image with infrared light. The Examiner noted that Edgar discloses one camera with a sensor adapted to capture visible and infrared signals and fails to disclose a reflective surface wherefrom either the visible or the infrared light will be reflected and either the infrared or visible light will be transmitted before the signals are detected. The Examiner asserted that Ross et al. discloses a system where the visible and infrared light passed through the object is directed to a reflective surface which

reflects the visible light into the sensor adapted to detect visible light and transmit the infrared light into a sensor adapted to detect infrared light. The Examiner asserted that the optical path of the infrared light is different than the optical path of the visible light and that these optical paths can be changed independent of each other. The Examiner asserted that the choice of two sensors is a design matter and would be have been obvious to one skilled in the art in view of Ross et al.

However, as will be set forth in detail below, it is submitted that the system and methods of generating a digital representation of an image defined by claims 1-3, 5, 8-12, 14, 17-26, 29 and 30 are non-obvious and patentably distinguishable from the teachings Edgar in view of Ross et al. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

As defined by claim 1, the present invention is directed to a method for generating a digital representation of an image. The method comprises: applying visible and infrared light to an image storing medium which includes the image; directing said visible and infrared light which is reflected from or transmitted through said image storing medium to a reflective surface, wherein said visible light is reflected by said reflective surface towards a first sensor and said infrared light is transmitted through said reflective surface towards a second sensor; detecting said visible light which is reflected from or transmitted through said image storing medium at said first sensor in order to provide a first image signal; and detecting said infrared light which is reflected from or transmitted through said image storing medium at said second sensor in order to provide a second image signal; whereby said second image signal may be used to modify said first image signal to generate a modified digital representation of said image; and wherein the optical distance between said image storing medium and said first sensor is different from the optical distance between said image storing medium and said second sensor.

As defined by claim 10, the present invention is directed to a method for generating a digital representation of an image. The method comprises: applying visible and infrared light to an image storing medium which includes the image; directing said visible and infrared light which is reflected from or transmitted through said image storing medium to a reflective surface, wherein said visible light is transmitted through said reflective surface towards a first sensor and said infrared light is reflected by said reflective surface towards a second sensor; detecting said visible light which is reflected from or transmitted through said image storing medium at said first sensor in order to provide a first image signal; and detecting said infrared light which is reflected from or transmitted through said image storing medium at said second sensor in order to provide a second image signal, whereby said second image signal may be used to modify said first image signal to generate a modified digital representation of said image; and wherein the optical distance between said image storing medium and said first sensor is different from the optical distance between said image storing medium and said second sensor.

As defined by claim 19, the present invention is directed to a system for use in generating a digital representation of an image. The system comprises: one or more light sources operable to apply first and second types of light to an image storing medium having an image; a first sensor responsive to at least said first type of light; a second sensor responsive to at least said second type of light; and a reflective surface which reflects said first type of light and transmits said second type of light, said reflective surface positioned such that when said first and second types of light are applied to an image storing medium, said first type of light which is reflected from or transmitted through said image storing medium will be reflected towards said first sensor and said second type of light which is reflected from or transmitted through said image storing medium will be transmitted through said reflective surface towards said second sensor; wherein

the system is configured such that the optical distance between said image storing medium and said first sensor is different from the optical distance between said image storing medium and said second sensor.

As defined by claim 29, the present invention is directed to a digital representation of an image, generated by the method comprising: applying a visible and infrared light to an image storing medium which includes the image; directing said visible and infrared light which is reflected from or transmitted through said image storing medium to a reflective surface, wherein one of said visible and infrared light is reflected by said reflective surface towards a first sensor and the other is transmitted through said reflective surface towards a second sensor, and further wherein the optical distance between said image storing medium and said first sensor is different from the optical distance between said image storing medium and said second sensor; detecting said visible light which is reflected from or transmitted through said image storing medium in order to provide a first image signal; detecting said infrared light which is reflected from or transmitted through said image storing medium in order to provide a second image signal; and modifying said first image signal by said second image signal in order to generate a modified digital representation of said image.

Edgar (U.S. Patent No. 6,075,590) discloses correction of surface defects in a reflection scan of a print made with visible light by using a scan of the print made with infrared light. Edgar does not disclose using two sensors, wherein one sensor is utilized to detect visible light and the second sensor is utilized to detect infrared light.

Ross et al. disclose using visible and non-visible radiation reflected from an object to develop at least two separate false colored images of the object which are combined to produce,

in real-time, a composite false colored image highlighting those portions of the object having a high degree of reflectance in the non-visible spectrum.

References relied upon to support a rejection under 35 U.S.C. §103 must provide an enabling disclosure, i.e., they must place the claimed invention in the possession of the public. *In re Payne*, 203 U.S.P.Q. 245 (C.C.P.A. 1979). Applicants find no teaching or suggestion by Edgar or Ross et al, alone or in combination, of a method of generating an image wherein the optical distance between the image storing medium and the first sensor is different from the optical distance between the image storing medium and the second sensor. Moreover, Applicants find no teaching or suggestion by Edgar or Ross et al, alone or in combination, of each sensor being independently moveable.

Furthermore, to establish prima facie obviousness of the claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). In view of the failure of Edgar or Ross et al, alone or in combination, to teach, disclose or suggest a method of generating an image utilizing a first sensor and a second sensor, wherein the optical distance between the image storing medium and the first sensor is different from the optical distance between the image storing medium and the second sensor, Edgar and Ross et al. do not render the presently claimed methods and systems of generating an image obvious. Moreover, in view of the failure of Edgar or Ross et al, alone or in combination, to teach, disclose or suggest a method of generating an image utilizing a first sensor and a second sensor, wherein the first sensor and the second sensor are each independently moveable, Edgar and Ross et al. do not render the presently claimed methods and systems of generating an image obvious. It is therefore submitted that the presently claimed system and methods are non-

obvious over and patentably distinguishable from Edgar in view of Ross et al. whereby the rejection under 35 U.S.C. §103 has been overcome. Reconsideration is respectfully requested.

In the Official Action, claims 6, 7, 15, 16, 27 and 28 were rejected under 35 U.S.C. § 103(s) as being unpatentable over Edgar (U.S. Patent No. 6,075,590) and Ross et al. and further in view of Edgar (WO 98/34397). The Examiner noted that Edgar '590 and Ross et al. fail to disclose the type of sensor used in the detection of infrared and visible light as including a linear or trilinear CCD array. The Examiner asserted that Edgar '397 discloses linear and trilinear CCD arrays and that they are well known in the process of correcting a scanned image of a film containing an image by using visible and infrared light. The Examiner asserted it would have been obvious as a matter of design choice to one skilled in the art to include the CCD arrays of Edgar '387 with Edgar '590 and Ross et al.

However, as will be set forth in detail below, it is submitted that the system and methods of generating a digital representation of an image defined by claims 6, 7, 15, 16, 27 and 28 are non-obvious and patentably distinguishable from the teachings Edgar '590 and Ross et al. in view of Edgar '387. Accordingly, this rejection is traversed and reconsideration is respectfully requested.

Dependent claims 6 and 7 depend from independent claim 1; dependent claims 15 and 16 depend from independent claim 10; and dependent claims 27 and 28 depend from independent claim 19. The deficiencies of Edgar '590 and Ross et al. with respect to independent claims 1, 10 and 19 are discussed in detail above. That is, Applicants find no teaching or suggestion by Edgar or Ross et al, alone or in combination, of a method of generating an image wherein the optical distance between the image storing medium and the first sensor is different from the optical distance between the image storing medium and the second sensor. In addition,

Applicants find no teaching or suggestion by Edgar or Ross et al, alone or in combination, of each sensor being independently moveable. These deficiencies are not resolved by Edgar '397.

Edgar '397 discloses a single pass scanner having a trilinear array, a source of white light, filters of the three primary colors and a separate source of infrared light which is utilized to remove medium-based defects from a scanned film image. Applicants find not teaching or suggestion by Edgar '397 of a method of generating an image wherein the optical distance between the image storing medium and the first sensor is different from the optical distance between the image storing medium and the second sensor. Moreover, Applicants find no teaching or suggestion by Edgar '397 of each sensor being independently moveable.

To establish prima facie obviousness of a claimed invention, all the limitations must be taught or suggested by the prior art, *In re Royka*, supra. Furthermore, references relied upon to support a rejection under 35 U.S.C. §103 must provide an enabling disclosure, i.e., they must place the claimed invention in the possession of the public, *In re Payne*, supra. Applicants find no teaching or suggestion by Edgar '590, Ross et al and Edgar '397, alone or in combination, of a method of generating an image wherein the optical distance between the image storing medium and the first sensor is different from the optical distance between the image storing medium and the second sensor. Moreover, Applicants find no teaching or suggestion by Edgar '590, Ross et al and Edgar '397, alone or in combination, of each sensor being independently moveable.

It is therefore submitted that the presently claimed system and methods are non-obvious over and patentably distinguishable from Edgar '590 and Ross et al in view of Edgar '397, whereby the rejection under 35 U.S.C. §103 has been overcome. Reconsideration is respectfully requested.

It is believed that the above represents a complete response to the Examiner's rejections under 35 U.S.C. §103 and places the present application in condition for allowance. Reconsideration an early allowance are requested.

Respectfully submitted,

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Version With Markings To Show Changes Made

In the Claims:

Please amend claims 1, 10, 19 and 29 as follows:

--1. (Amended) A method for generating a digital representation of an image, comprising:

(a) applying visible and infrared light to an image storing medium which includes the image;

(b) directing said visible and infrared light which is reflected from or transmitted through said image storing medium to a reflective surface, wherein said visible light is reflected by said reflective surface towards a first sensor and said infrared light is transmitted through said reflective surface towards a second sensor;

(c) detecting said visible light which is reflected from or transmitted through said image storing medium at said first sensor in order to provide a first image signal; and

(d) detecting said infrared light which is reflected from or transmitted through said image storing medium at said second sensor in order to provide a second image signal;

whereby said second image signal may be used to modify said first image signal to generate a modified digital representation of said image[.]; and wherein the optical distance between said image storing medium and said first sensor is different from the optical distance between said image storing medium and said second sensor.--

--10. (Amended) A method for generating a digital representation of an image, comprising:

(a) applying visible and infrared light to an image storing medium which includes the image;

(b) directing said visible and infrared light which is reflected from or transmitted through said image storing medium to a reflective surface, wherein said visible light is transmitted through said reflective surface towards a first sensor and said infrared light is reflected by said reflective surface towards a second sensor [and];

(c) detecting said visible light which is reflected from or transmitted through said image storing medium at said first sensor in order to provide a first image signal; and

(d) detecting said infrared light which is reflected from or transmitted through said image storing medium at said second sensor in order to provide a second image signal; and

whereby said second image signal may be used to modify said first image signal to generate a modified digital representation of said image[.]; and wherein the optical distance between said image storing medium and said first sensor is different from the optical distance between said image storing medium and said second sensor.--

--19. (Amended) A system for use in generating a digital representation of an image, comprising:

(a) one or more light sources operable to apply first and second types of light to an image storing medium having an image;

(b) a first sensor responsive to at least said first type of light;

(c) a second sensor responsive to at least said second type of light; and

(d) a reflective surface which reflects said first type of light and transmits said second type of light, said reflective surface positioned such that when said first and second types of light are applied to an image storing medium, said first type of light which is reflected

from or transmitted through said image storing medium will be reflected towards said first sensor and said second type of light which is reflected from or transmitted through said image storing medium will be transmitted through said reflective surface towards said second sensor[.];

wherein the system is configured such that the optical distance between said image storing medium and said first sensor is different from the optical distance between said image storing medium and said second sensor.--

--29. (Amended) A digital representation of an image, generated by the method comprising:

(a) applying a visible and infrared light to an image storing medium which includes the image;

(b) directing said visible and infrared light which is reflected from or transmitted through said image storing medium to a reflective surface, wherein one of said visible and infrared light is reflected by said reflective surface towards a first sensor and the other is transmitted through said reflective surface towards a second sensor, and further wherein the optical distance between said image storing medium and said first sensor is different from the optical distance between said image storing medium and said second sensor;

(c) detecting said visible light which is reflected from or transmitted through said image storing medium in order to provide a first image signal;

(d) detecting said infrared light which is reflected from or transmitted through said image storing medium in order to provide a second image signal; and

(e) modifying said first image signal by said second image signal in order to generate a modified digital representation of said image.--